CONTRACT DATA REQUIREMENTS LIST

DD FORM 1423 (MECHANIZED)

CATEGORY: MISC SYSTEM/ITEM: ENVIRONMENTAL CAP/BATTERYCAP

TO CONTRACT/PR: C20AAK02, C40AAK02

1. SEQUENCE NUMBER	14. DRFT/REG/REPRO DISTRIBUTION COPIES
2. TITLE OF DATA ITEM 3. SUBTITLE 4. DATA ITEM NUMBER 5. CONTRACT REFERENCE 6. TECHNICAL OFFICE 7. DD 8. APP 9 250 CODE	REQUIRED
10. FREQUENCY 11. AS OF DATE 12. DATE OF 1ST SUBMISSION 13. DATE 16. REMARKS	
1. A001	14. SEE ADDRESS CODE / /
2. ENGINEERING CHANGE PROPOSAL (ECP) 3. *	
4. DI-CMAN-80639B	
5. MIL-STD-973	
6. AMSSB-RSO-ADM(RI) 7. LT 8	9.**
10. ASREQ 11	15. TOTAL 0/0/0
12. ASREQ 13.	
II ENGINEERING ACTIONS. **DISTRIE IMPLEMENTED BY THE DOD CONFIGURATI	HE SUBMISSION AND PROCESSING OF ALL CLASS BUTION STATEMENT WILL BE ASSIGNED AND ION MANAGER.
1. A002	14.
2. REQUEST FOR DEVIATION (RFD) 3.	
4. DI-CMAN-80640B	
5. MIL-STD-973	
6. AMSSB-RSO-ADM(RI) 7. LT 8.	- 9.**
10. ASREQ 11	15. TOTAL 0/ 0/ 0
12. ASREQ 13.	
16. REMARKS **DISTRIBUTION STATEMENT WILL BE FIGURATION MANAGER.	ASSIGNED AND IMPLEMENTED BY THE DOD CON-

INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12-M for detailed instructions)

FOR GOVERNMENT PERSONNEL

Item A. Self-explanatory.

Item B. Self-explanatory.

Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as AProvisioning≅, AConfiguration Management≊, etc.

Item D. Enter name of system/item being acquired that data will support.

Item E. Self-explanatory (to be filled in after contract award).

Item F. Self-explanatory (to be filled in after contract award).

Item G. Signature of preparer of CDRL.

Item H. Date CDRL was prepared.

Item I. Signature of CDRL approval authority.

Item J. Date CDRL was approved.

Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.

Item 2. Enter title as it appears on data acquisition document cited in Item 4.

Item 3. Enter subtitle of data item for further definition of data item (optional entry).

Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.

Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g., Statement of Work paragraph number.

Item 6. Enter technical office responsible for ensuring adequacy of the data item.

Item 7. Specify requirement for inspection/acceptance of the data item by the Government.

Item 8. Specify requirement for approval of a draft before preparation of the final data item.

Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref. DoD 5230.r\24).

Item 10. Specify number of times data items are to be delivered.

Item 11. Specify as-of date of data item, when applicable.

Item 12. Specify when first submittal is required.

Item 13. Specify when subsequent submittals are required, when applicable.

Item 14. Enter addressees and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.

Item 15. Enter total number of draft/final copies to be delivered.

Item 16. Use for additional/clarifying information for Items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

DD Form 1423 Reverse, JUN 90

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423

a. Group I. Definition - Data which is not otherwise essential to the contractor=s performance of the primary contracted effort (production, development, testing and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 as no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply the data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. These estimated data prices shall not include any amount for rights in data. The Government=s right to use the data shall be governed by the pertinent provisions of the contract.

See attached Statement of Work (SOW) for performance requirements.

- I. The following engineering exceptions apply to TDPL 442-675, which is for reference only:
 - 1. On 442-686, Zone C8, Note 5, change: MIL-R-6855 to SAE AMS-R-6855A.
- 2. On P442-675, change: National Stock Number from 5340-01-382-0201 to 6665-01-382-0201.
 - 3. Add SPI P442-675, Rev CL
- II. The following engineering exceptions apply to TDPL EA-PRF-2174:
 - Add the following NORs:

5-15-19260

Z16-1504-008

2. Delete drawings:

442-301

3. Add drawings:

442-062

III. Government Furnished Equipment:

- 1. Chemical Agent Monitor (NSN 6665-01-199-4153) and associated TM (TM 3-6665-331-10) or Improved Chemical Agent Monitor (NSN 6665-01-357-8502) and associated TM (TM 3-6665-343-10).
 - Protective gloves:
 - a. NSN 8415-01-138-2497 for size small.
 - b. NSN 8415-01-138-2498 for size medium.
 - c. NSN 8415-01-138-2499 for size large.
 - d. NSN 8415-01-138-2500 for size X-large.
 - Arctic mittens:
 - a. NSN 8415-01-457-4773 for size small.
 - b. NSN 8415-01-457-4775 for size medium.
 - c. NSN 8415-01-457-4778 for size large.
 - d. NSN 8415-01-457-4779 for size X-large.
- IV. The following warning statement applies to all drawings, parts lists listed on TDPL 442-675 and EA-PRF-2174:

Warning - This TDP contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. sec 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App 2401 et seq. Violation of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DOD Directive 5230.15.

NOTICE TO ACCOMPANY THE DISSEMINATION OF EXPORT-CONTROLLED TECHNICAL DATA

1. Export of information contained herein, which includes, in some circumstances, release to foreign nationals within the United States, without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulation (ITAR), or the Department of Commerce for items controlled by the Export Administration Regulations (EAR), may constitute a violation of law.

2. Under 22 U.S.C. 2778 the penalty for unlawful export of items or information controlled under the ITAR is up to 2 years imprisonment, or a fine of \$100,000, or both. Under 50 U.S.C., Appendix 2401, the penalty for unlawful export of items or information controlled under the EAR is a fine of up to \$1,000,000, or five times the value of the exports, whichever is greater; or for

an individual, imprisonment of up to 10 years, or a fine of up to \$250,000, or both.

3. In accordance with your certification that establishes you as a "certified US contractor, unauthorized dissemination of this information is prohibited and may result in disqualification as a certified US contractor, and may be considered in determining your eligibility for future contracts with the Department of Defense.

4. The US Government assumes no liability for direct patent infringement, or contributory patent infringement or misuse of technical

data.

5. The US Government does not warrant the adequacy, accuracy, currency, or completeness of the technical data.

6. The US Government assumes no liability for loss, damage, or injury resulting from manufacture or use for any purpose of any product, article, system, or material involving reliance upon any or all technical data furnished in response to the request for technical data.

7. If the technical data furnished by the Government will be used for commercial manufacturing or other profit potential, a license for such use may be necessary. Any payments made in support of the request for data do not include or involve any license rights.

8. A copy of this notice shall be provided with any partial or complete reproduction of these data that are provided to qualified US contractors.

INCH-POUND

EA-PRF-2174 4 August 1999

EDGEWOOD CHEMICAL BIOLOGICAL CENTER PERFORMANCE PURCHASE DESCRIPTION

RETAINER, BATTERY, CHEMICAL AGENT MONITOR

1. SCOPE

1.1 Scope. This specification covers requirements and verification procedures for one type of Chemical Agent Monitor (CAM) battery retainer.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to insure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-PRF-49471/11(ER) - Battery, Non-Rechargeable, High Performance, BA-X800/U

STANDARDS

FEDERAL

FED-STD-595 - Colors, Use In Government Procurement

FSC 6665

DEPARTMENT OF DEFENSE

MIL-STD-461 - Electromagnetic Interference Characteristics, Requirements for MIL-STD-462 - Electromagnetic Interference Characteristics, Measurement of

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

U.S. ARMY EDGEWOOD CHEMICAL BIOLOGICAL CENTER

DRAWINGS

5-15-19260 - Retainer, Battery

It is strongly recommended that suppliers refer to the drawings and/or documents listed in section 6.5 for guidance to ensure that the interface requirements are met.

(Copies are available from Technical Director, U.S. Army Edgewood Chemical Biological Center, ATTN: AMSSB-REN-R, Aberdeen Proving Ground, MD 21010-5424.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

- 3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.3.
- 3.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational maintenance requirements, and promotes economically advantageous life cycle costs.

3.3 Interfaces.

3.3.1 Interface with CAM. The battery retainer shall interface and lock in place with the monitor case assembly mounted bayonet insert while providing sealing integrity between the battery retainer and bayonet insert. The retainer shall maintain these requirements while it is

being subjected to a pulling force of not less than 4 pounds. Refer to the battery retainer interface control drawing, 5-15-19260 for additional details.

- 3.3.2 Dimensions and design constaints. The battery retainer shall conform to the dimensional properties specified on Drawing 5-15-19260 and the design constraints specified in MIL-PRF-49471/11.
 - 3.3.3 Color. The battery retainer shall be black with a dull or matte finish.
- 3.3.4 Operability. The battery retainer shall be capable of being installed and removed by personnel wearing chemical material protective gloves and arctic mittens.
 - 3.3.5 Weight. The battery retainer shall not exceed 43 grams in weight.
 - 3.4 Performance requirements.
- 3.4.1 Stability. When installed, the battery retainer shall secure the CAM battery tightly enough to maintain continuous electrical contact, with no power interruption, when the CAM is exposed to the kinds of shocks encountered under use as described in 3.5 and 3.6.

3.5 Environment.

- 3.5.1 Operation after drop. The battery retainer shall withstand a drop from a height of 48 inches onto 2 inches of plywood backed by concrete while at a temperature of -25 ± 3 °C. The retainer shall then be visually inspected. The retainer shall then meet the performance requirement for leakage (3.5.2).
- 3.5.2 Leakage. With a vacuum of at least 36 ± 2 inches of water applied to the sealed interior of the battery retainer, the leak rate shall be less than 10 milliliters per minute (mL/min). With the battery retainer installed on a simulated case assembly battery compartment fixture identical to the battery retainer's mating surface, and modified with a pneumatic fitting, and the interior of the retainer and fixture evacuated to 36 ± 2 inches of water, the measured flow shall be less than 25 milliliters per minute (mL/min). The simulated fixture shall duplicate the dimensions and tolerances of the CAM case shell.
- 3.5.3 Immersion. With the battery retainer installed on a simulated CAM battery compartment fixture and the retainer and fixture submersed in water to a depth of three feet for not less than five minutes, the battery retainer shall allow no leakage into the retainer and fixture interior. The simulated fixture shall duplicate the dimensions and tolerances of the CAM case shell. Water temperature shall be 10 to 20°C and the temperature of the retainer and fixture shall be 5 to 15°C higher than the water temperature.

3.5.4 Electromagnetic Interference (EMI). When installed in the CAM, the battery retainer shall not compromise the ability of the CAM to meet the EMI requirements specified by Table I and MIL-STD-461. Refer to 3.8 for further details.

TABLE I. EMI requirements

Method		Range Limit 14 kHz to 10 GHz (narrowband) Figure 4–14 @ 1 meter 14 kHz to 10 GHz (broadband) Figure 4–15 @ 1 meter		_	
RE-02					
Method	Range	Polarity E_Field		-Field Mo	dulation
RS03	14 kHz to 2 MHz	V	1 V/m	cw, am	
	2 MHz to 15 MHz	lv	10 V/m	cw, am	
	15 MHz to 30 MHz	v	10 V/m	cw, am	, fm
	30 MHz to 150 MHz	V/H	5 V/m	cw, am	, fm
	150 MHz to 500 MHz	V/H	5 V/m	cw, am	, fm
	500 MHz to 1 GHz	V/H	5 V/m	cw, am	, fm
•	1 GHz to 10 GHz	V/H	5 V/m	cw, pm	

NOTE:cw = continuous

am = amplitude modulation, 50% modulation, 1 kHz tone

fm = frequency modulation, 10 kHz deviation, 1 kHz tone

pm = pulse modulation, 1 kHz PRF, 10msec pulse width, 1% duty cycle

- 3.6 Support and ownership.
- 3.6.1 Reliability. The battery retainer shall have a five—year service life.
- 3.6.2 Shelf life. The battery retainer shall have a shelf life of not less than 10 years.
- 3.6.3 Safety. The battery retainer shall be free of burrs, sharp edges or other features that would be hazardous to the operator.
- 3.7 Toxic chemicals, hazardous substances, and ozone depleting chemicals (ODCs). The use of toxic chemicals, hazardous substances, or ODCs shall be avoided, whenever feasible
- 3.8 Materials. The battery retainer shall be made from a material that resists chemical nerve and blister agents and can be decontaminated using standard decontaminants such as soap and water. The battery retainer should be made of a conductive material. If the retainer is made of a conductive material, the Government shall waive the EMI (3.5.4) requirement.
- 3.9 Government—loaned property (See 6.4). The following equipment shall be loaned for testing in accordance with this specification.

Chemical Agent Monitor (CAM) and associated technical manuals.

Arctic Mittens.

Protective Gloves.

4. VERIFICATION

- 4.1 Verification alternatives. Alternative test methods, techniques, or equipment, including the application of statistical process control, tool control, or cost effective sampling procedures may be proposed. Acceptable alternative verification approaches shall be identified in the contract.
- 4.2 Verification methods. The methods of verification of the requirements of this specification, as specified in 4.3, are the following:
 - a. Analysis Review of data produced as the result of analytical computations.
 - b. Certification Written statement attesting to the conformance to a predefined general requirement.
 - c. Examination Visual examination of a part and/or its respective installation, or examination of associated drawings, specifications, or purchase orders.
 - d. Demonstration An uninstrumented, non-quantitative test where success is determined on the basis of observation alone.
 - e. Test The exercising of part, unit, or combinations thereof to obtain measured quantitative results.
- 4.3 Classification of inspections. Two inspection classifications have been identified for verification of performance requirements: first article inspection, and conformance inspection. First article inspection is normally used to verify that manufactured unit(s) meet the requirements of section 3. Conformance inspection is normally used for each production—line unit prior to its delivery to, and acceptance by, the government. Conformance inspection verifies that the manufactured unit(s) meet selected critical requirements of section 3. A verification matrix is provided in Table I which relates the section 3 requirement to the verification method and the details of the inspections to be performed for each of the inspection classifications.
- 4.3.1 First article inspection. When specified in the contract (see 6.2), a sample shall be subjected to first article inspection. First article inspection shall be performed on eight production representative units when a first article sample is required (see 3.1). This inspection shall include all the tests, examinations, demonstrations, certifications, and analyses identified by an "X" in column 4 in Table II. Column 3 in Table II identifies the applicable verification method paragraph number. The presence of one or more defects shall be cause for rejection.
- 4.3.2 Conformance inspection. All production items shall be subjected to conformance inspections and shall include the tests, examinations, demonstrations, and certifications identified by an "X" in column 5 in Table II. Column 3 in Table II identifies the applicable verification method paragraph number. The contractor shall be responsible for the performance of the conformance inspection. Presence of one or more defects shall be cause for rejection.

TABLE	11.	Verification	ins	pection
rements		Verification		First

Requirement	Requirements Paragraph	Verification Paragraph	First Article Inspection	Conformance Inspection
Interface with CAM	3.3.1	4.4.1	X	
Dimensions	3.3.2	4.4.2	X	X
Color	3.3.3	4.4.3	X	
Operability	3.3.4	4.4.4	X	
Weight	3.3.5	4.4.5	X	
Stability	3.4.1	4.5.1	. X	
Drop	3.5.1	4.6.1	X	
Leakage	3.5.2	4.6.2	X	X
Immersion	3.5.3	4.6.3	X	
EMI	3.5.4	4.6.4	X	
Reliability	3.6.1	4.7.1	X	
Shelf Life	3.6.2	4.7.2	X	·
Safety	3.6.3	4.7.3	X	
Toxic Chemicals	3.7	4.8	Х	
Materials	3.8	4.9	X	

- 4.4 Interfaces. Interface requirements shall be verified as follows:
- 4.4.1 Interface with CAM. Install the battery retainer on the case assembly and ensure that the battery retainer locks securely to the case assembly mounted bayonet insert by modifying a retainer to accommodate a pulling force of not less than 4 pounds. Perform the leakage (4.6.2) test to ensure that the battery retainer maintains sealing integrity.
- 4.4.2 Dimensions and design constraints. Measure the internal depth, inner diameter, and outside diameter of the battery retainer. Confirm that the battery retainer accommodates the CAM battery without any distortion to the battery or the battery retainer.
- 4.4.3 Color. Analysis of all visible parts shall be provided which demonstrates that the battery retainer will comply with the color requirement. FED-STD-595 may be used.
- 4.4.4 Operability. Demonstrate that the battery retainer can be installed and removed by a person wearing the specified gloves and mittens.
 - 4.4.5 Weight. Weigh the battery retainer to ensure retainer meets the requirements of 3.3.5.

4.5 Performance requirements

4.5.1 Stability. Install a new battery into the CAM battery compartment and then place the battery retainer into position over the battery. Ensure that the nozzle protective cap and protective dust cap are in place. Place the CAM on a flat surface. Turn on the CAM. Tap the CAM with enough force to move it 1 inch and ensure that the CAM does not reset. Repeat in at least four different locations on the CAM to include the battery retainer, nozzle protective cap, and the left and right sides of the CAM.

4.6 Environment.

- 4.6.1 Operation after drop. Place the battery retainer into an environmental chamber and lower the temperature to -25 ± 3 °C. Remove the retainer from the chamber and immediately perform the drop test as specified. Visually inspect the retainer for cracks, breaks, or deformity. The retainer shall then pass the leakage (4.6.2) test.
- 4.6.2 Leakage. Seal the battery retainer interior and apply a vacuum of 36 inches of water to the sealed interior. Remove the sealing device from the retainer and install the retainer on a fabricated simulated CAM case battery compartment fixture equipped with a pneumatic fitting. Evacuate the interior of the CAM to 36 ± 2 inches of water. Retainer shall meet the requirements of 3.5.2.
- 4.6.3 Immersion. Fabricate a simulated CAM battery compartment fixture as specified in 3.5.3. Install the battery retainer on the simulated CAM fixture. Ensure that the water is at the required temperature. Submerge the retainer and fixture to the required depth for the required time. Remove the retainer and fixture and dry thoroughly. Remove the battery retainer and inspect for the intrusion of water.
- 4.6.4 Electromagnetic Interference (EMI). Install the battery retainer on a CAM and ensure that the CAM still meets the EMI requirements specified by Table I and MIL-STD-462. Refer to 3.8 for additional details.

4.7 Support and ownership.

- 4.7.1 Reliability. Connect and disconnect the battery retainer from the CAM battery housing 100 times and verify that the retainer still operates properly.
- 4.7.2 Shelf life. Analysis of parts and materials shall be provided which demonstrate that the battery retainer will comply with the performance specifications after 10 years of storage.
 - 4.7.3 Safety. Visually verify that the battery retainer meets the safety requirements.
- 4.8 Toxic chemicals, hazardous substances, and ozone depleting chemicals (ODCs). Analysis of parts and materials shall be provided which demonstrate that the battery retainer does not contain toxic substances (see 6.3).
- 4.9 Materials. Certification indicating that the materials used meet the requirements of 3.8 shall be required.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain req-

uisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

- 6.1 Intended use. This battery retainer is intended for use with the Chemical Agent Monitor (CAM).
 - 6.2 Acquisition requirements. Acquisition documents must specify the following:

(a) Title, number, and date of this specification.

(b) Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).

(c) Packaging requirements (see 5.1).

- d. The availability of advisory technical information (see 6.5).
- e. The availability of necessary Government loaned property (see 6.4).
- (d) First article:
- (1) Time allowed for contractor submission of samples for Government test and evaluation after award of contract when testing is performed by the Government.
- (2) Name and address of test facility and shipping instructions when testing is performed by the Government.
- (3) Time required for the Government to notify the contractor whether or not to proceed with production.
- 6.3 Hazardous material content. The SD-14 provides a readily available list of toxic chemicals, hazardous substances, and ODCs. (NOTE: The list of toxic chemicals and hazardous substances changes. Any updates to the list will be reflected first in the EPA Title III List of Lists (EPA 560/4-92-011)). The SD-14 can be obtained from:

Federal Supply Service Bureau Specs Section (3FPB-W) Suite 8100 470 E. L'Enfant Plaza S.W. Washington, DC 20407

6.4 Government—loaned property. The contracting officer should arrange to furnish the property listed in 3.9.

6.5 Advisory Technical Data Package (TDP) or drawings. The contracting officer should arrange to provide the following and any other advisory information to the contractor. These are for reference only. The top drawing for the battery retainer advisory TDP is 442-675.

DRAWINGS

5-15-17013 -	Improved Chemical Agent Monitor (ICAM)
5-15-17016 -	Monitor Case Assembly
442-024 -	Monitor Case Assembly (CAM)
442-061 -	Case, Investment Casting
442-065 -	Insert, Bayonet
442-301 -	Chemical Agent Monitor (CAM)
442-675 -	Retainer, Battery

6.6 Subject term (key word) listing.

Agent detector Toxic agent Detector Power source

Preparing activity:

Technical Director
U.S. Army EdgewoodChemical Biological Center
ATTN: AMSSB-REN-SS
Aberdeen Proving Ground, MD 21010-5424

Statement of Work Battery Cap Assembly f/ Chemical Agent Monitor (CAM)

C.1.0 Scope

The contractor shall manufacture the Battery Cap Assembly in strict compliance with Performance Purchase Description EA-PRF-2174.

C.2.0 Applicable Documents

EA-PRF-2174

TDP 442-675 (reference only)

MIL-B-117

MIL-STD-129

MIL-STD-461

MIL-STD-462

MIL-STD-810E

MIL-STD-2073-1

MIL-P-116

L-P-378

SD-14

ANSI/ASQC Q90 (ISO 9000)

ANSI/ASQC Q91 (ISO 9001)

ANSI/ASQC Q94 (ISO 9004)

MIL-PRF-49471/11(ER)

FED-STD-595

5-15-19260

MIL-STD-973

MIL-HDBK-304

ASTM D 4919

C.3.0 Requirements

The contractor, as an independent contractor and not as an agent of the Government, shall provide the necessary services, personnel, labor, facilities, materials, supplies, and equipment (except those specifically designated as Government furnished equipment/material) to perform the following:

C.3.1 Manufacturing

C.3.1.1 Battery Cap Assembly. The contractor shall manufacture battery cap assemblies (including First Article) in strict compliance with Performance Specification EA-PRF-2174, 5-15-19260, and all of the documents cited therein, respectively. The contractor shall manufacture all items using the same manufacturing methods, materials, tooling, test equipment, test procedures and facilities planned for use in production.

Attach 002

C.3.1.2 Government Furnished Equipment. The Government shall furnish one (1) Chemical Agent Monitor or one (1) Improved Chemical Agent Monitor and its associated technical manuals as required by EA-PRF-2174 if the successful bidder has or can obtain the required NRC license. The Government shall also provide arctic mittens and protective gloves.

C.3.2 Engineering Management

- C.3.2.1 Engineering Data and Specifications. The contractor shall establish, maintain, and make available for Government review at the contractor's facility all engineering drawings, parts lists, product specifications, manufacturing process procedures, unique quality control procedures, packaging instructions, and lists of suppliers and manufacturers used by the contractor to manufacture the battery cap assembly.
- C.3.2.2 Final TDP Delivery. The contractor shall copy and submit all engineering drawings, parts lists, product specifications, manufacturing process procedures, unique quality control procedures, packaging instructions, and lists of suppliers and manufacturers used by the contractor to manufacture the battery cap assembly.
- C.3.2.3 Configuration Management.
- C.3.2.3.1 Configuration Management Plan (CMP). The contractor shall implement and maintain a configuration management plan throughout the life of the contract. MIL-STD-973 contains relevant configuration management information that may be useful to the contractor. The contractor shall obtain the written approval of the PCO prior to the implementation of the CMP and any subsequent changes.
- C.3.2.3.2 Requests for Deviation, Requests for Waiver, Engineering Change Proposal and Notice of Revision.
- C.3.2.3.2.1 The contractor shall prepare and submit Requests for Deviation and Requests for Waiver for any performance requirements.
- C.3.2.3.2.2 The Government will maintain formal configuration control of all performance specifications and configuration drawings referenced in Section C.3.1.
- C.3.2.3.2.3 All engineering changes against items under Government Configuration Control shall be documented on an engineering change proposal and notice of revision, in Government or contractor format, and submitted to the Government for approval in accordance with the approved CMP.
- C.3.2.3.3 Configuration Control Board (CCB).
- C.3.2.3.3.1 The contractor shall establish and implement the use of a CCB to review engineering changes and recommend appropriate action prior to implementation.
- C.3.2.3.3.2 The contractor shall provide the Government at least ten (10) days notice prior to convening the CCB so that if the Government chooses, a representative may participate. The contractor shall provide the Government with the engineering change proposal and a notice of revision at least ten (10) days prior to convening the CCB.

- C.3.2.3.3.3 If the contractor generates a change against an item that is under Government Configuration Control, the contractor shall provide an engineering change proposal and notice of revision, in Government or contractor format, at least ten (10) days prior to the Government convening the CCB. No engineering changes shall be implemented without Government approval.
- C.3.2.3.4 Material Review Board (MRB).
- C.3.2.3.4.1 The contractor shall establish and implement the use of a MRB to determine the acceptance status of nonconforming parts and material used in fabrication of the battery cap assemblies throughout the life of the contract.
- C.3.2.3.4.2 The contractor shall provide the Government at least ten (10) days notice prior to convening the MRBs so if the Government chooses, a representative may participate.
- C.3.2.3.4.3 If as a result of the MRB a change is generated against an item that is under Government Configuration Control, the contractor shall provide an engineering change proposal and notice of revision, in Government or contractor format, at least ten (10) days prior to the Government convening the CCB. The contractor shall participate on the Government CCB. No engineering changes shall be implemented without Government approval.
- C.3.3 Serialization and Markings.
- C.3.3.1 Serial Numbers. None.
- C.3.3.2 Markings, Tags and Identification Plates.
- C.3.3.2.1 The contractor shall insure that markings, tags or identification plates on the systems are consistently located on the exterior of the systems, securely attached or marked, uniform in shape and size, legible, and visible to the naked eye.
- C.3.3.2.2. The contractor shall ensure that the information placed on the systems does not degrade systems performance.
- C.3.4 Packaging
- C.3.4.1 Special Packaging Instructions (SPIs).
- C.3.4.1.1.The contractor shall package all parts entering the military distribution system in accordance with SPIs.
- C.3.4.1.1.1 The contractor may utilize the Government SPIs provided for information purposes, modify the Government SPIs, or develop and use contractor SPIs for military packaging.
- C.3.4.1.1.1 If the contractor elects to use the Government furnished SPIs, packaging validation testing is not required.
- C.3.4.1.1.2 If the contractor elects to develop and use contractor SPIs, or if the Government furnished SPIs are modified, the contractor shall perform packaging validation testing to ensure that the packaging meets or exceeds the requirements cited on the Government furnished SPIs.

- C.3.4.1.1.1.3 All changes shall be documented on an Engineering Change Proposal (ECP) and Notice of Revision (NOR) in contractor's format, and submitted to the Government for approval in accordance with C.3.3 Configuration Management.
- C.3.4.1.1.3.1 If packaging validation testing is required, the contractor shall prepare and submit a Packaging Test Plan. The contractor shall conduct packaging testing in accordance with this contract.
- C.3.4.1.1.3.2 The contractor shall submit copies of the modified Government SPIs or contractor developed SPIs to the Government within 30 days of the completion of the packaging testing.
- C.3.4.2 Preservation, Unit Packing, Packing, Unitization and Marking.
- C.3.4.2.1 The generic term packaging, shall include preservation, unit packing, packing, unitization, and marking. All items going into the military distribution system (as set forth in Section F, Deliveries) require military packaging, as defined in MIL-STD-2073-1. Items not going into military stock shall be packaged in accordance with standard commercial practices and shall be received at the final destination undamaged and in useable condition.
- C.3.4.2.2 The packaging for the battery cap assembly shall be military packaging, in accordance with the detailed requirements of MIL-STD-2073-1.
- C.3.4.2.3 The contractor shall use, where practicable, advanced technology or innovative methods and materials for shipment and storage, for the purpose of effecting packaging economies. As a reference, the contractor may use MIL-STD-2073-1 Standard Practice for Military Packaging; MIL-STD-129-Standard Practice, Marking for Shipment and Storage; and MIL-HDBK-304 Packaging Cushioning Design, in the development of acceptable materials, containers, and processes for packaging. These documents may also be used for determining methods for preservation, unit packing, packing, unitization, and marking; procedures required to select packaging materials for packaging designs; and guidance in the preparation of packaging requirements expressed in the SPIs, and packaging drawings.
- C.3.4.2.4 Protection. The contractor shall design all military packaging to provide unit protection in the Level A shipping configuration during shipment, handling and storage in accordance with the above work definition and MIL-STD-2073-1. The following storage and packaging rough handling conditions shall be met:

C.3.4.2.4.1 Storage. The contractor shall provide packaging capable of providing environmental protection to its contents for a period of 9 weeks under the following conditions:

Condition	Parameters
Desert	+160°F ± 2°F
Tropic	+113°F + 2°F
	85 + 5% RH
Arctic	-50°F + 2°F
Cyclic	Three cycles, each cycle consisting of 1 week under each of the preceding conditions in sequence

C.3.4.2.4.2 Rough Handling. The contractor shall provide packaging capable of providing protection to its contents under the following rough handling conditions as specified in MIL-STD-810E, conducted sequentially:

Condition	Purpose
Secured Cargo Vibration	Test to simulate transport by truck, rail, aircraft, and ocean
Loose Cargo Vibration	Test to simulate field (off road) transports
Shock (drop)	Test to simulate packaging rough handling

C.3.4.3 Fabrication. The contractor shall fabricate prototypes of the packaging designs and conduct (1) packaging validation testing if required; and (2) packaging first article testing in accordance with the first article packaging inspection requirements as found in Section E of the contract (FAR Clause 52.209-3 Alt. I).

C.3.4.4 Hazardous Material Identification.

C.3.4.4.1 The contractor shall assure that the shipping configuration or container, as applicable, complies with Performance Oriented Packaging (POP), in accordance with Annex 1 Part 7 of the International Maritime Organization – International Maritime Dangerous Goods Code (IMO – IMDGC); Chapter 7 of the International Civil Aviation Organization – Technical Instructions for Safe Transportation of Dangerous Goods by Air (ICAO-TDGA); and 49 Code of Federal Regulation (CFR) Transportation, Parts 107-178 if the end item is or contains a regulated hazardous material.

C.3.4.4.2 The contractor shall design, mark, and certify the packaging in accordance with these documents. The contractor shall conduct all testing in accordance with ASTM D 4919 Testing of Hazardous Materials Packaging.

C.3.5 QUALITY ASSURANCE SYSTEM

- C.3.5.1 Quality System.
- C.3.5.1.1 The contractor shall implement, execute, and maintain a Quality System in accordance with International Standard Operation 9002 (ISO 9002) for the life of this contract.
- C.3.5.1.2 The contractor may use an existing Quality System provided it meets acquisition needs and is acceptable to the Government. Registrars Accreditation Board (RAB) certification is not required for the performance of this contract.
- C.3.5.2 Quality System Plan (QSP). The contractor shall utilize the QSP submitted in response to this solicitation and approved by the Government at contract award as the baseline for all quality program activities. The contractor shall update the QSP with all comments identified by the Government. The contractor shall make the approved plan available to the Government 30 days after contract award. The contractor shall obtain the written approval of the PCO prior to the implementation of the QSP and any subsequent changes. The contractor shall implement and maintain the QSP throughout the life of this contract.
- C.3.5.3 Reduction of Latent or Incipient Defects. The contractor shall implement a process for the reduction of latent or incipient defects in the battery cap assembly and its components.
- C.3.5.4 First Article Testing (FAT). The contractor shall conduct FAT of the battery cap assembly, and applicable military packaging, as defined in Section E of this contract.
- C.3.5.4.1 FAT Test Plan. The contractor shall prepare and submit a detailed FAT test plan.
- C.3.5.4.2 The contractor shall conduct FAT on eight (8) battery cap assemblies. The contractor shall perform FAT in accordance with EA-PRF-2174.
- C.3.5.4.3 The contractor shall ensure that all test personnel including subcontractors are knowledgeable on the operation of the CAM and be capable of properly performing the necessary operational checks as required during the conduct of the test.
- C.3.5.4.4 The contractor shall package and transport all test hardware to and from all test sites.
- C.3.5.4.5 FAT Report
- C.3.5.4.1 The contractor shall prepare and submit a FAT Report.
- C.3.5.4.2 The contractor shall include all test data to include but not limited to actual dimensional, physical, and electrical test results.
- C.3.5.4.3 The contractor shall provide certification of materials and components as an appendix to the FAT Test Report.
- C.3.5.5 Production of Battery Cap Assembly. The contractor shall not initiate production or fabrication of hardware until all FAT test results have been approved by the Government.

See attached Statement of Work (SOW) for performance requirements.

- I. The following engineering exceptions apply to TDPL 442-492, which is for reference only:
 - 1. On 442-715, Zone C4, Note 5, change: MIL-R-6855 to SAE AMS-R-6855A.
- 2. On P442-492, change: National Stock Number from 5340-01-382-3203 to 6665-01-382-3203.
 - 3. Add SPI P442-492, Rev C.
- II. The following engineering exceptions apply to TDPL EA-PRF-2175:
 - 1. Add the following NORs:

5-15-19263

Z16-1504-011

2. Delete drawings:

442-301

3. Add drawings:

442-021

- III. Government Furnished Equipment:
- 1. Chemical Agent Monitor (NSN 6665-01-199-4153) and associated TM (TM 3-6665-331-10) or Improved Chemical Agent Monitor (NSN 6665-01-357-8502) and associated TM (TM 3-6665-343-10).
 - 2. Protective gloves:
 - a. NSN 8415-01-138-2497 for size small.
 - b. NSN 8415-01-138-2498 for size medium.
 - c. NSN 8415-01-138-2499 for size large.
 - d. NSN 8415-01-138-2500 for size X-large.
 - 3. Arctic mittens:
 - a. NSN 8415-01-457-4773 for size small.
 - b. NSN 8415-01-457-4775 for size medium.
 - C. NSN 8415-01-457-4778 for size large.
 - d. NSN 8415-01-457-4779 for size X-large.

The following warning statement applies to all drawings, parts lists listed on TDPL 442-492 and EA-PRF-2175:

Warning - This TDP contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. sec 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App 2401 et seq. Violation of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DOD Directive

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- 1. Export of information contained herein, which includes, in some circumstances, release to foreign nationals within the United States, without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulation (ITAR), or the Department of Commerce for items controlled by the Export Administration Regulations (EAR),
- 2. Under 22 U.S.C. 2778 the penalty for unlawful export of items or information controlled under the ITAR is up to 2 years imprisonment, or a fine of \$100,000, or both. Under 50 U.S.C., Appendix 2401, the penalty for unlawful export of items or information controlled under the EAR is a fine of up to \$1,000,000, or five times the value of the exports, whichever is greater; or for an individual, imprisonment of up to 10 years, or a fine of up to \$250,000, or both.
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- 6. The US Government assumes no liability for loss, damage, or injury resulting from manufacture or use for any purpose of any product, article, system, or material involving reliance upon any or all technical data furnished in response to the request for
- 7. If the technical data furnished by the Government will be used for commercial manufacturing or other profit potential, a license for such use may be necessary. Any payments made in support of the request for data do not include or involve any license rights.
- 8. A copy of this notice shall be provided with any partial or complete reproduction of these data that are provided to qualified US contractors.

EDGEWOOD CHEMICAL BIOLOGICAL CENTER PERFORMANCE PURCHASE DESCRIPTION

FA- PRF- 2115 Attack 004

PROTECTIVE DUST CAP, CHEMICAL AGENT MONITOR

1. SCOPE

1.1 Scope. This specification covers requirements and verification procedures for one type of Chemical Agent Monitor (CAM) protective dust cap.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been nade to insure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Decense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the so-icitation (see 6.2).

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-461 Electromagnetic Interference Characteristics, Requirements for MIL-STD-462 Electromagnetic Interference Characteristics, Measurement of

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 1D, Philadelphia, PA 19111-5094.)

FSC 6665

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

PUBLICATIONS

PURCHASE DESCRIPTIONS

EA-C-1793 - Chemical Agent Monitor

DRAWINGS

INTERFACE CONTROL DRAWING

5-15-19263 - Protective Dust Cap

(Copies are available from Technical Director, U.S. Army Edgewood Chemical Biological Center, ATTN: AMSSB-REN-R, Aberdeen Proving Ground, MD 21010-5424.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, nowever, supersedes applicable laws and regulations unless a specific exemption has been obained.

3. REQUIREMENTS

- 3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspecion in accordance with 4.2.
- 3.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational maintenance requirements, and pronotes economically advantageous life cycle costs.

3.3 Interfaces.

3.3.1 Interface with CAM. The protective dust cap shall interface, lock in place, and provide sealing integrity with the CAM rear receptacle connector and cover the 19—way connector on one face. On the other face, the dust cap shall interface and lock in place with the nozzle protective cap assembly inner body while maintaining the sealing integrity of the nozzle protective cap sealing ring. The retaining strap shall provide a looped end that will allow for the retention of the strap to the CAM case handle. The protective dust cap shall comply with all the

Attack OUT

- 3.3.2 Dimensions. The protective dust cap shall measure no more than 27.2 millimeters mm) long and a diameter of no more than 43.5mm. The attaching retaining strap shall be flexble, while retaining memory, and have a free hanging length of not less than 91mm and a tretched length of not greater than 343mm. The protective dust cap shall comply with all the equirements of the interface control drawing 5-15-19263. The advisory Technical Data Packige (TDP) listed in 6.5 details one solution for complying with the dimensional requirements.
- 3.3.3 Color. The protective dust cap and retaining strap shall be black with a dull or matte inish.
- 3.3.4 Operability. The protective dust cap shall be capable of being installed and removed by personnel wearing chemical protective gloves and arctic mittens.
- 3.3.5 Out-gassing. When the dust cap is heated to $75 \pm 3^{\circ}$ C it shall not outgas material hat will cause degradation of the CAM performance. A reduction by more than 25 millivolts mV) direct current (dc) of the reactant ion peak (RIP) height in a CAM's head amplifier output or the addition of secondary peaks in the wave form shall be unacceptable CAM performance. Head amplifier peak height output (H) is defined in Figures 1 and 2.

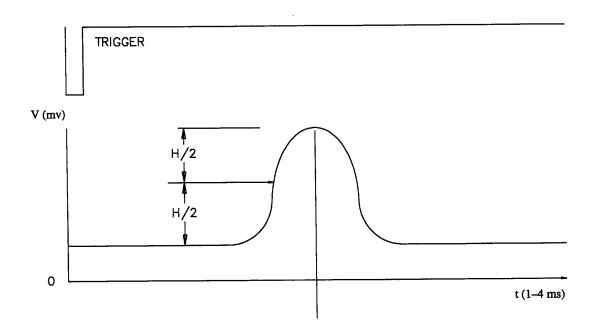


FIGURE 1. G-Mode head amplifier output

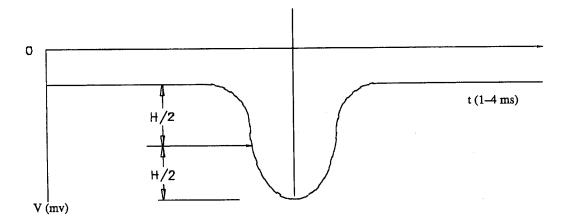


FIGURE 2. H-mode head amplifier output

3.4 Operational needs.

3.4.1 Performance.

- 3.4.1.1 Reliability. The protective dust cap shall have a minimum five year service life. The estraining strap shall support a free hanging weight of 4 pounds (lbs) without breaking or deaching from the cap.
 - 3.4.1.2 Shelf life. The protective dust cap shall have a shelf life of not less than 10 years.

3.5 Environment.

- 3.5.1 Operation after drop. The protective dust cap, installed on the CAM, shall withstand a drop from a height of 48 inches onto two inches of plywood backed by concrete while at a emperature of -25 ± 3 °C. The cap will then be visually inspected. The cap shall meet the performance requirement for leakage (3.5.2).
- 3.5.2 Leakage. The protective dust cap shall allow no water leakage past the seals at either he connector or nozzle protective cap.
- 3.5.3 Electromagnetic Interference (EMI). With the protective dust cap installed on the CAM, the CAM shall meet the EMI requirements specified by Table I and MIL-STD-461. Refer to 3.7 for further details.

Attach o

163		0 GHz (broadband)	Figure 4-15 @ 1	meter
Method	Range	Polarity	E–Field	Modulation
RS-03	14 kHz to 2 MHz	V	1 V/m	cw, am
	2 MHz to 15 MHz	V	10 V/m	cw, am
	15 MHz to 30 MHz	v	10 V/m	cw, am, fm
	30 MHz to 150 MHz	V/H	5 V/m	cw, am, fm
	150 MHz to 500 MHz	V/H	5 V/m	cw, am, fm
	500 MHz to 1 GHz	V/H	5 V/m	cw, am, fm
	1 GHz to 10 GHz	V/H	5 V/m	cw, pm

Figure 4-14 @ 1 meter

14 kHz to 10 GHz (narrowband)

NOTE: cw = continuous

ım = amplitude modulation, 50% modulation, 1 kHz tone

m = frequency modulation, 10 kHz deviation, 1 kHz tone

om = pulse modulation, 1 kHz PRF, 10msec pulse width, 1% duty cycle

- 3.6 Toxic chemicals, hazardous substances, and ozone depleting chemicals (ODCs). The 1se of toxic chemicals, hazardous substances, or ODCs shall be avoided, whenever feasible
- 3.7 Materials. The protective dust cap and retaining strap shall be made from a material hat resists chemical nerve and blister agents and can be decontaminated using standard deconaminants such as soap and water. The protective dust cap shall be made of a conductive material (such as aluminum). If conductive material is used, the Government will waive the EMI 3.5.3) requirement.
- 3.8 Government—loaned property. (See 6.4). The following equipment shall be loaned or testing in accordance with this specification.
 - a. Chemical Agent Monitor (CAM) and associated technical manuals.
 - b. Arctic Mittens.
 - c. Protective Gloves.

4. VERIFICATION

- 4.1 Verification alternatives. Alternative test methods, techniques, or equipment, including the application of statistical process control, tool control, or cost effective sampling procedures may be proposed. Acceptable alternative verification approaches shall be identified in he contract.
- 4.2 Verification methods. The methods of verification of the requirements of this specification, as specified in 4.3, are the following:
- 1. Analysis Review of data produced as the result of analytical computations.
- certification Written statement attesting to the conformance to a predefined general equirement.

nined on the basis of observation alone.

Test — The exercising of part, unit, or combinations thereof to obtain measured quantitaive results.

Attach oo4

- 4.3 Classification of inspections. Two inspection classifications have been identified for rerification of performance requirements: first article inspection, and conformance inspection. First article inspection is normally used to verify that manufactured unit(s) meet the requirements of Section 3. Conformance inspection is normally used for each production—line unit prior to its delivery to, and acceptance by, the government. Conformance inspection verifies hat the manufactured unit(s) meet selected critical requirements of section 3. A verification natrix is provided in Verification Inspection, Table II, which relates the section 3 requirement of the verification method and the details of the inspections to be performed for each of the inspection classifications.
- 4.3.1 First article inspection. When specified in the contract (see 6.2), a sample shall be subjected to first article inspection. First article inspection shall be performed on eight production representative units when a first article sample is required (see 3.1). This inspection shall nelude all the tests, examinations, demonstrations, certifications, and analyses identified by an 'X" in column 4 in the Verification Inspection Table II. Column 3 in Table II identifies the applicable verification method paragraph number. The presence of one or more defects shall be cause for rejection.
- 4.3.2 Conformance inspection. All production items shall be subjected to conformance inspections and shall include the tests, examinations, demonstrations, and certifications identified by an "X" in column 5 in Verification Inspection, Table II. Column 3 in Table II identifies he applicable verification method paragraph number. The contractor shall be responsible for he performance of conformance.

TABLE II. Verification inspection

Requirement	Requirements Paragraph	Verification Paragraph	First Article Inspection	Conformance Inspection
nterface with CAM	3.3.1	4.4.1	X	
Dimensions	3.3.2	4.4.2	X	X
'olor	3.3.3	4.4.3	X	
perability	3.3.4	4.4.4	X	
out-gassing	3.3.5	4.4.5	X	
eliability	3.4.1.1	4.5.1.1	X	
helf Life	3.4.1.2	4.5.1.2	X	
тор	3.5.1	4.6.1	X	
eakage	3.5.2	4.6.2	X	X
MI	3.5.3	4.6.3	X	

Statement of Work Environmental Cap f/ Chemical Agent Monitor (CAM)

C.1.0 Scope

The contractor shall manufacture the Environmental Cap in strict compliance with Performance Purchase Description EA-PRF-2175.

C.2.0 Applicable Documents

EA-PRF-2175 TDP 442-492 (reference only) MIL-B-117 MIL-STD-129 MIL-STD-461 MIL-STD-462 MIL-STD-810E MIL-STD-2073-1

MIL-P-116

L-P-378

SD-14

ANSI/ASQC Q90 (ISO 9000)

ANSI/ASQC Q91 (ISO 9001)

ANSI/ASQC Q94 (ISO 9004)

5-15-19263

MIL-STD-973

MIL-HDBK-304

ASTM D 4919

EA-C-1793

C.3.0 Requirements

The contractor, as an independent contractor and not as an agent of the Government, shall provide the necessary services, personnel, labor, facilities, materials, supplies, and equipment (except those specifically designated as Government furnished equipment/material) to perform the following:

C.3.1 Manufacturing

C.3.1.1 Environmental Cap. The contractor shall manufacture Environmental Caps (including First Article) in strict compliance with Performance Specification EA-PRF-2175, 5-15-19263, and all of the documents cited therein, respectively. The contractor shall manufacture all items using the same manufacturing methods, materials, tooling, test equipment, test procedures and facilities planned for use in production.

- C.3.1.2 Government Furnished Equipment. The Government shall furnish one (1) Chemical Agent Monitor or one (1) Improved Chemical Agent Monitor and its associated technical manuals as required by EA-PRF-2175 if the successful bidder has or can obtain the required NRC license. The Government shall also provide arctic mittens and protective gloves.
- C.3.2 Engineering Management
- C.3.2.1 Engineering Data and Specifications. The contractor shall establish, maintain, and make available for Government review at the contractor's facility all engineering drawings, parts lists, product specifications, manufacturing process procedures, unique quality control procedures, packaging instructions, and lists of suppliers and manufacturers used by the contractor to manufacture the Environmental Cap.
- C.3.2.2 Final TDP Delivery. The contractor shall copy and submit all engineering drawings, parts lists, product specifications, manufacturing process procedures, unique quality control procedures, packaging instructions, and lists of suppliers and manufacturers used by the contractor to manufacture the Environmental Cap.
- C.3.2.3 Configuration Management.
- C.3.2.3.1 Configuration Management Plan (CMP). The contractor shall implement and maintain a configuration management plan throughout the life of the contract. MIL-STD-973 contains relevant configuration management information that may be useful to the contractor. The contractor shall obtain the written approval of the PCO prior to the implementation of the CMP and any subsequent changes.
- C.3.2.3.2 Requests for Deviation, Requests for Waiver, Engineering Change Proposal and Notice of Revision.
- C.3.2.3.2.1 The contractor shall prepare and submit Requests for Deviation and Requests for Waiver for any performance requirements.
- C.3.2.3.2.2 The Government will maintain formal configuration control of all performance specifications and configuration drawings referenced in Section C.3.1.
- C.3.2.3.2.3 All engineering changes against items under Government Configuration Control shall be documented on an engineering change proposal and notice of revision, in Government or contractor format, and submitted to the Government for approval in accordance with the approved CMP.
- C.3.2.3.3 Configuration Control Board (CCB).
- C.3.2.3.3.1 The contractor shall establish and implement the use of a CCB to review engineering changes and recommend appropriate action prior to implementation.
- C.3.2.3.3.2 The contractor shall provide the Government at least ten (10) days notice prior to convening the CCB so that if the Government chooses, a representative may participate. The contractor shall provide the Government with the engineering change proposal and a notice of revision at least ten (10) days prior to convening the CCB.

- C.3.2.3.3.3 If the contractor generates a change against an item that is under Government Configuration Control, the contractor shall provide an engineering change proposal and notice of revision, in Government or contractor format, at least ten (10) days prior to the Government convening the CCB. No engineering changes shall be implemented without Government approval.
- C.3.2.3.4 Material Review Board (MRB).
- C.3.2.3.4.1 The contractor shall establish and implement the use of a MRB to determine the acceptance status of nonconforming parts and material used in fabrication of the Environmental Caps throughout the life of the contract.
- C.3.2.3.4.2 The contractor shall provide the Government at least ten (10) days notice prior to convening the MRBs so if the Government chooses, a representative may participate.
- C.3.2.3.4.3 If as a result of the MRB a change is generated against an item that is under Government Configuration Control, the contractor shall provide an engineering change proposal and notice of revision, in Government or contractor format, at least ten (10) days prior to the Government convening the CCB. The contractor shall participate on the Government CCB. No engineering changes shall be implemented without Government approval.
- C.3.3 Serialization and Markings.
- C.3.3.1 Serial Numbers. None.
- C.3.3.2 Markings, Tags and Identification Plates.
- C.3.3.2.1 The contractor shall insure that markings, tags or identification plates on the systems are consistently located on the exterior of the systems, securely attached or marked, uniform in shape and size, legible, and visible to the naked eye.
- C.3.3.2.2. The contractor shall ensure that the information placed on the systems does not degrade systems performance.
- C.3.4 Packaging
- C.3.4.1 Special Packaging Instructions (SPIs).
- C.3.4.1.1. The contractor shall package all parts entering the military distribution system in accordance with SPIs.
- C.3.4.1.1.1 The contractor may utilize the Government SPIs provided for information purposes, modify the Government SPIs, or develop and use contractor SPIs for military packaging.
- C.3.4.1.1.1 If the contractor elects to use the Government furnished SPIs, packaging validation testing is not required.
- C.3.4.1.1.2 If the contractor elects to develop and use contractor SPIs, or if the Government furnished SPIs are modified, the contractor shall perform packaging validation testing to ensure that the packaging meets or exceeds the requirements cited on the Government furnished SPIs.

- C.3.4.1.1.3 All changes shall be documented on an Engineering Change Proposal (ECP) and Notice of Revision (NOR) in contractor's format, and submitted to the Government for approval in accordance with C.3.3 Configuration Management.
- C.3.4.1.1.3.1 If packaging validation testing is required, the contractor shall prepare and submit a Packaging Test Plan. The contractor shall conduct packaging testing in accordance with this contract.
- C.3.4.1.1.3.2 The contractor shall submit copies of the modified Government SPIs or contractor developed SPIs to the Government within 30 days of the completion of the packaging testing.
- C.3.4.2 Preservation, Unit Packing, Packing, Unitization and Marking.
- C.3.4.2.1 The generic term packaging, shall include preservation, unit packing, packing, unitization, and marking. All items going into the military distribution system (as set forth in Section F, Deliveries) require military packaging, as defined in MIL-STD-2073-1. Items not going into military stock shall be packaged in accordance with standard commercial practices and shall be received at the final destination undamaged and in useable condition.
- C.3.4.2.2 The packaging for the Environmental Cap shall be military packaging, in accordance with the detailed requirements of MIL-STD-2073-1.
- C.3.4.2.3 The contractor shall use, where practicable, advanced technology or innovative methods and materials for shipment and storage, for the purpose of effecting packaging economies. As a reference, the contractor may use MIL-STD-2073-1 Standard Practice for Military Packaging; MIL-STD-129-Standard Practice, Marking for Shipment and Storage; and MIL-HDBK-304 Packaging Cushioning Design, in the development of acceptable materials, containers, and processes for packaging. These documents may also be used for determining methods for preservation, unit packing, packing, unitization, and marking; procedures required to select packaging materials for packaging designs; and guidance in the preparation of packaging requirements expressed in the SPIs, and packaging drawings.
- C.3.4.2.4 Protection. The contractor shall design all military packaging to provide unit protection in the Level A shipping configuration during shipment, handling and storage in accordance with the above work definition and MIL-STD-2073-1. The following storage and packaging rough handling conditions shall be met:

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C.3.4.2.4.1 Storage. The contractor shall provide packaging capable of providing environmental protection to its contents for a period of 9 weeks under the following conditions:

Condition	Parameters
Desert	+160°F ± 2°F
Tropic	+113°F + 2°F
	85 + 5% RH
Arctic	-50°F + 2°F
Cyclic	Three cycles, each cycle consisting of 1 week under each of the preceding conditions in sequence

C.3.4.2.4.2 Rough Handling. The contractor shall provide packaging capable of providing protection to its contents under the following rough handling conditions as specified in MIL-STD-810E, conducted sequentially:

Condition	Purpose
Secured Cargo Vibration	Test to simulate transport by truck, rail, aircraft, and
	ocean
Loose Cargo Vibration	Test to simulate field (off road) transports
Shock (drop)	Test to simulate packaging rough handling

C.3.4.3 Fabrication. The contractor shall fabricate prototypes of the packaging designs and conduct (1) packaging validation testing if required; and (2) packaging first article testing in accordance with the first article packaging inspection requirements as found in Section E of the contract (FAR Clause 52.209-3 Alt. I).

C.3.4.4 Hazardous Material Identification.

C.3.4.4.1 The contractor shall assure that the shipping configuration or container, as applicable, complies with Performance Oriented Packaging (POP), in accordance with Annex 1 Part 7 of the International Maritime Organization – International Maritime Dangerous Goods Code (IMO – IMDGC); Chapter 7 of the International Civil Aviation Organization – Technical Instructions for Safe Transportation of Dangerous Goods by Air (ICAO-TDGA); and 49 Code of Federal Regulation (CFR) Transportation, Parts 107-178 if the end item is or contains a regulated hazardous material.

C.3.4.4.2 The contractor shall design, mark, and certify the packaging in accordance with these documents. The contractor shall conduct all testing in accordance with ASTM D 4919 Testing of Hazardous Materials Packaging.

C.3.5 QUALITY ASSURANCE SYSTEM

- C.3.5.1 Quality System.
- C.3.5.1.1 The contractor shall implement, execute, and maintain a Quality System in accordance with International Standard Operation 9002 (ISO 9002) for the life of this contract.
- C.3.5.1.2 The contractor may use an existing Quality System provided it meets acquisition needs and is acceptable to the Government. Registrars Accreditation Board (RAB) certification is not required for the performance of this contract.
- C.3.5.2 Quality System Plan (QSP). The contractor shall utilize the QSP submitted in response to this solicitation and approved by the Government at contract award as the baseline for all quality program activities. The contractor shall update the QSP with all comments identified by the Government. The contractor shall make the approved plan available to the Government 30 days after contract award. The contractor shall obtain the written approval of the PCO prior to the implementation of the QSP and any subsequent changes. The contractor shall implement and maintain the QSP throughout the life of this contract.
- C.3.5.3 Reduction of Latent or Incipient Defects. The contractor shall implement a process for the reduction of latent or incipient defects in the Environmental Cap and its components.
- C.3.5.4 First Article Testing (FAT). The contractor shall conduct FAT of the Environmental Cap, and applicable military packaging, as defined in Section E of this contract.
- C.3.5.4.1 FAT Test Plan. The contractor shall prepare and submit a detailed FAT test plan.
- C.3.5.4.2 The contractor shall conduct FAT on eight (8) Environmental Caps. The contractor shall perform FAT in accordance with EA-PRF-2175.
- C.3.5.4.3 The contractor shall ensure that all test personnel including subcontractors are knowledgeable on the operation of the CAM and be capable of properly performing the necessary operational checks as required during the conduct of the test.
- C.3.5.4.4 The contractor shall package and transport all test hardware to and from all test sites.
- C.3.5.4.5 FAT Report
- C.3.5.4.1 The contractor shall prepare and submit a FAT Report.
- C.3.5.4.2 The contractor shall include all test data to include but not limited to actual dimensional, physical, and electrical test results.
- C.3.5.4.3 The contractor shall provide certification of materials and components as an appendix to the FAT Test Report.
- C.3.5.5 Production of Environmental Cap. The contractor shall not initiate production or fabrication of hardware until all FAT test results have been approved by the Government.

ADDRESS CODE DISTRIBUTION - ECPs/RFDs/RFWs/VECPs (Configuration Management)

- 1. Concurrent distribution of Engineering Change Proposals (ECPs), Request for Deviations (RFDs), Request for Waivers (RFWs) or Value Engineering Change Proposals (VECPs) shall be submitted by the Contractors as follows:
- 2. The contractor shall provide the original plus 1 copy to:

Commander, Soldier Biological and Chemical Command ATTN: AMSSC-REN-SE Building E5027 Aberdeen Proving Ground, MD 21010-5423.

3. Provide one copy to the following design agency:

Commander, Soldier Biological and Chemical Command ATTN: AMSSB-PM-RNN-I Building E4465 Aberdeen Proving Ground, MD 21010-5424.

- 4. Provide one copy to:
 - a. (Contracting officer)
 Director, Armament and Chemical Acquisition, and Logistics Activity
 ATTN: AMSTA-CM-CREC
 Rock Island, IL 61299-7630.
 - b. (Engineering support)
 Commander, Soldier Biological and Chemical Command ATTN: AMSSB-RSO-MAD (RI)
 Rock Island, IL 61299-7390.
 - c. Administrative contracting officer
- 5. For VECPs only, provide one copy to each Value Engineering Office:

Commander, Soldier Biological and Chemical Command ATTN: AMSSB-REN-E Aberdeen Proving Ground, MD 21010-5423.

6. When ECPs, RFDs or RFWs are determined to be Urgent, Critical and/or Schedule impacting, an action copy should be provided via data facsimile (FAX) to AMSSB-PM-RNN-I at 410-436-7917 and to AMSSB-RSO-MAD (RI) at 309-782-3253. This transmission is to be immediately followed with the usual hard copy mailing.

CM at EW

DOCUMENT SUMMARY LIST

AHach 006

Item: ENVIRONMENTAL CAP/Battery Cap
AIGN: 6665-01-382-3203 6665-01-382-020)

Control Number/PRON: C20AAK02, C40AAK02

Identifies all first tier documents (cited in SOW) (applicable DIDs). Also included are all referenced documents (2nd, (includes DID block 10 references), 3rd and lower tier) which have been tailored.

DOCUMENT CATEGORY:

CATEGORY O - Unless otherwise specified in the solicitation, contract, or contract modifications, all documents are for guidance and information only.

CATEGORY 1 - The requirements contained in the directly cited document are contractually applicable to the extent specified. All referenced documents are for guidance and information only.

CATEGORY 2 - The requirements contained in the directly cited document and the reference documents identified in the directly cited document are contractually applicable to the extent specified. All subsequently referenced documents are for guidance and information only.

CATEGORY 3 - Unless otherwise specified in the solicitation, contract or contract modification, all requirements contained in the directly cited document and all reference and subsequently referenced documents are contractually applicable to the extent specified.

Document Number (Contract Reference) Applicable Tailoring	Document Title	Document Date/ Document Category
1a. MIL-STD-973	Configuration Management	17 Apr 92 Cat 2

See section C clause(s) titled: Value Engineering Change Proposals, Engineering Change Proposals, Deviation and/or Ozone-Depleting Substances.

In the application of MIL-STD-973 Paragraphs 5.4.3, 5.4.4 and 5.4.8 apply, and are tailored as follows:

- (1) Page 53, para 5.4.3.4., Delete "a contractor designed form, or a letter" in the first sentence.
- (2) Page 53, para 5.4.3.3.2a., Line 5, add "or size" after "weight".
- (3) Page 53, Delete para 5.4.3.5., and replace by, "Unless otherwise specified in the contract, requests for critical deviations should be approved or disapproved within 30 calendar days of receipt by the Government and for all other deviations within 60 calendar days of receipt by the Government."
 - (4) Para 5.4.3.5.1. Minor deviations. Line 3. Delete "...by the activity...Class II change" and insert "by the Contracting Officer."
 - (5) Page 55, para 5.4.4.3.2a., Line 7, add "or size" after "weight".
 - (6) Page 56.Delete paragraph 5.4.4.5 and replace by "Unless otherwise specified in the contract

requests for critical waivers should be approved or disapproved within 30 calendar days of receipt by the Government and for all other RFWs within 60 calendar days of receipt by the Government."

- (7) Para 5.4.4.5.1. Minor waivers. Lines 4 and 5. Delete "...Contract Administration Office (CAO)." Insert "...Configuration Manager and a Government Contracting Officer."
 - (8) Page 61, para 5.4.8.3.4., in line 6 add "or size" after "weight".
- (9) Page 61, Add new para 5.4.8.3.4.1., "An RFD shall be supported by test data and analysis, where appropriate, and provided to support the decision regarding acceptance of the nonconformance."
- (10) Page 61, Delete para 5.4.8.3.5. and replace by, "Unless otherwise specified in the contract, deviations are approved and authorized only by the Contracting Officer. Critical deviations should be processed within 30 calendar days of receipt by the Government and all other RFDs processed within 60 calendar days of receipt by the Government."
 - (11) Page 62, para 5.4.8.4, Delete lines 7 thru 10 and replace with "standard. All RFWs shall be submitted as specified in the contract for approval or disapproval and acceptance or rejection by the authorized Contracting Officer."
 - (12) Page 62, para 5.4.8.4.4., on line 6 add "or size" after "weight".
- (13) Page 62, Add new para 5.4.8.4.4.1., "an RFW shall be supported by test data and analysis, where appropriate, and provided to support the decision regarding acceptance of the nonconformance."

1b. Interim Notice 3 (DO)	Configuration Management	13 Jan 95 Cat 2
1c. DI-CMAN-80639B (seq A001)	Engineering Change Proposal	13 Jan 95 Cat 2
1d. DI-CMAN-80640B (seq A002)	Request for Deviation	13 Jan 95 Cat 2
1e. DI-CMAN-80641B (seq A003)	Request for Waiver	13 Jan 95 Cat 2
1f. DI-CMAN-80642B (seq A004)	Notice of Revision	13 Jan 95 Cat 2
2. ANSI/ISO/ASQC Q9002 or equivalent	Model for Quality Assurance in Production, Installation & Servicing	18 Jul 94

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GUIDANCE ON DOCUMENTATION OF CONTRACT REQUIREMENTS LIST (CDRL)

The following information is furnished to provide guidance with respect to the abbreviations and codes utilized in various blocks of DD Form 1423, Contract Data Requirements List.

Block 1. Sequence Number. This number is specified by DOD components in accordance with FAR Supplement Subpart 4.71.

Block 2. Title of Description of Data. This represents the title or brief description of the data. This title should be identical to the Data Item Description (DID) title with Block 3 being used for further identification, if required.

Block 3. Subtitle of Data. If the title requires further identification, a subtitle is entered.

Block 4. Authority, Data Item Number. Data item number of the DID which provides the data preparation instructions.

Block 5. Contract Reference. The specific paragraph number of the contract procurement request, system specification, or other applicable document which identifies the effort associated with the data item authorized by Block 4 above.

Block 6. Technical Office. The office that is responsible for assuring the adequacy of the data item unless this responsibility is delegated elsewhere in the contract or in Block 7 on the DD Form 1423.

Block 7. DD Form 250 Requirement. This block designates the location (contractor's facility or destination) for performance of Government inspection and acceptance. The applicable codes for inspection and acceptance are cited below. The Government activity to perform the destination acceptance task is entered in Block 14 as the first addressee.

Code	Inspection	Acceptance			
S S	*Source(DD Form 250)	*Source(DD Form 250)			
DD	Destination(DD Form 250)	Destination(DD Form 250)			
SD	*Source(DD Form 250)	Destination(DD Form 250)			
DS	Destination(DD Form 250)	*Source(DD Form 250)			
LT	Letter of Transmittal only				
NO	No inspection or acceptance required				
XX	Inspection/acceptance requirements specified elsewhere in the contract.				

^{*}Source indicates contractor's facility,

Block 8. Approval Code. Items of critical data requiring specified advanced written approval, such as test plans, are identified by an "A" in this field. This data requires submission of a preliminary draft prior to publication of the final document. When advanced approval is not required, this field is blank.

Block 9. Distribution Statement Required. The code letter corresponding to the distribution statement to be marked on the technical data item by the contractor, in accordance with DoD Directive 5230.24 and the guidance in DoD 5010.12-M.

Block 10. Frequency. The codes that appear in this block are cited below:

ANNLY Annually ASGEN As generated*
ASREQ As required*
BI-MO Every 2 months

BI-WE Every 2 weeks DAILY Daily
DFDEL Deferred Delivery MTHLY Monthly

ONE/P One Preliminary ONE/R One time with revisions
QRTLY Quarterly R/ASR Revision as required*

SEMIA Every 6 months WEKLY Weekly

XTIME** Number of time to be submitted (1TIME, 2TIMES, etc.)

*Use of these codes requires further explanation in block 16 to provide the contractor with guidance necessary to accurately price the deliverable data item.

**A number must be inserted in place of the "X".

Block 11. As of Date (AOD). When data it submitted only once, this block indicates the number of days the data is to be submitted prior to the end of the reporting period; e.g., "15" would place the AOD for this report as 15 days before the end of each month, quarter, or year depending on the frequency established in Block 10; "0" places the AOD at the end of the month, quarter, or year. Further guidance is shown in Block 13 or 16 as required.

Block 12. Date of First Submission. This block indicates the initial data submission date (Year/Month/Day). When the contract start date has not been established, this block indicates the number of days after the contract start date that the data is due; e.g., 30 days after contract (DAC). Further information, if required is contained in Block 13. "DFDEL" indicates deferred delivery.

Block 13. Date of Subsequent Submission/Event Identification. When data is submitted more than once, the date(s) of subsequent submission(s) is indicated in this block. Example: "Not later than (NLT) 15 days before start of production"; "45 days before first article", etc.

Block 14. Distribution and Addressees. Addressees and number of copies (draft/regular/reproducible) to be forwarded to each addressee as cited in this block. Addressees are indicated by office symbols (i.e., AMSIO-XYZ). A list explaining these symbols and their addressees is attached to the form. When reproducible copies are required, the type of copies required will be cited in this block or Block 16.

NOTE: Unless otherwise cited in Block 10 of DD Form 1664, entries in Blocks 3 through 9 on DD Form 1664, Data Item Descriptions, are for information purposes only and are not contractually binding.

NOTE: It is required that data items be delivered using electronic media. Where possible electronic transmission (e-mail) is the most preferred method. Refer to the Contract Data Requirements List (CDRL), DD Form 1423 for more specific information (i.e., e-mail addresses, etc.)

For narrative kinds of reports, submission of a 3 1/2 inch disk in Rich Text Format (RTF), Microsoft Word or by e-mail is acceptable.

For spreadsheets or database kinds of reports, the acceptable software packages would be Microsoft Office products, i.e., Access or Excel. If these packages are not available, the information could be forwarded using a word processing kind of document saved in a Rich Text Format (RTF).

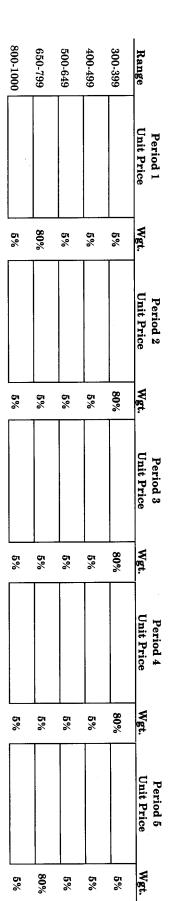
Pricing Evaluation Summary

CLIN 0001

Battery Cap

NSN: 6665-01-382-0201

First Article Test



CLIN 0002

Environmental Cap

NSN: 6665-01-382-3203

First Article Test

275-325	225-274	170-224	135-169	100-134	Range
					Period 1 Unit Price
5%	5%	5%	5%	80%	Wgt.
		:			Period 2 Unit Price
5%	5%	50%	35%	5%	Wgt.
					Period 3 Unit Price
5%	5%	5%	5%	80%	Wgt.
					Period 4 Unit Price
5%	60%	25%	57 %	5%	Wgt.
					Period 5 Unit Price
5%	5%	5%	5%	80%	Wgt.

- 1. This will be an all or none procurement. Contractor's failing to bid on all items, all years, and all ranges may be disqualified.
- 52 For evaluation purposes, the Government has weighted the ranges based on the likelihood that if an order is placed, it will weights and minimum quantities for each range and adding the totals for all CLIN's and all years be placed in that particular range. An evaluation price will be calculated by multiplying the offered prices by their respective
- 3. First Article Testing (FAT) is required on this product prior to production.

 The hox to the right of First Article Test for your proposed price of FAT. The loca
- The box to the right of First Article Test for your proposed price of FAT. The location of the box indicates the probable year of the FAT requirement. Failure to propose on FAT may be a reason for disqualification.
- FAT costs proposed will be added to the evaluation price in the total as explained in note 2, above.
- Ģ, The FAT price will be priced separately, and will be amortized into the unit price for the first ordering quantity.